

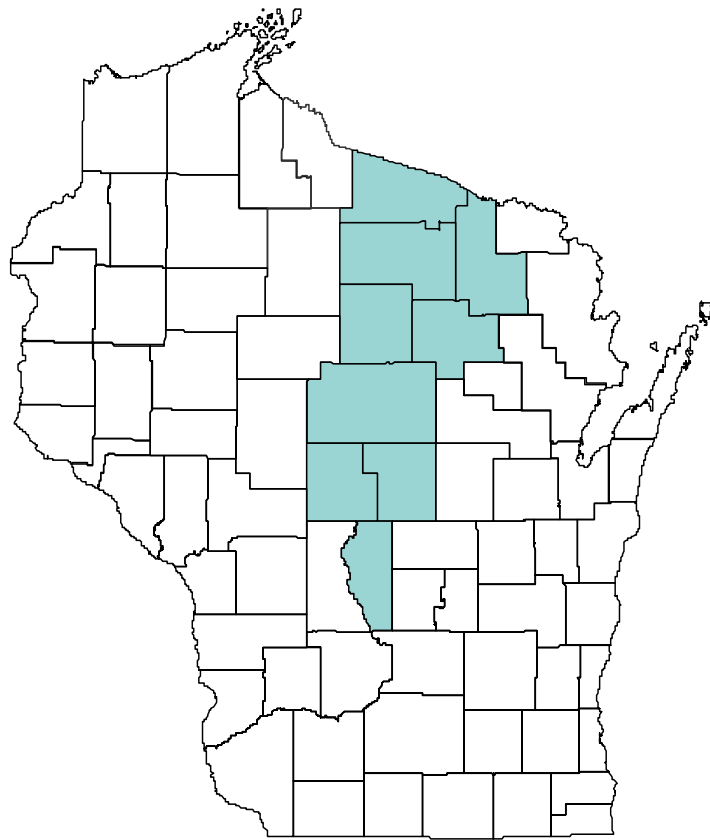
Workforce Development Area Profile

North Central Wisconsin

Adams, Forest, Langlade, Lincoln, Marathon, Oneida,
Portage, Vilas, and Wood Counties.

The labor market is a constant ebb and flow of supply and demand. Too little demand for workers creates too much supply and unemployment increases. But too little supply of workers means job vacancies and lack of employment growth.

Every Workforce Development Area in the state should anticipate a tight labor supply condition by the end of the next decade. Planners in each area must understand the unique set of employment characteristics in their region to development a strategy to meet a future where demand will exceed supply.



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State of Wisconsin
Department of Workforce Development
Office of Economic Advisors
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Industry employment and projections

This profile seeks to help employers, economic developers and job seekers inform their decisions. To that end, it surveys employment projections (by industry and by occupation), current employment and wages (by industry), top occupations within the top industries, and income data.

The Office of Economic Advisors projects that total employment in North Central Wisconsin will grow by nearly 26,600 jobs or 13.4 percent between 2002 and 2012. (See table below.) This roughly matches Wisconsin's projected job growth rate and puts North Central Wisconsin near the middle of the job-growth pack among Wisconsin Workforce Development areas. (See page 2, upper right bar graph.)

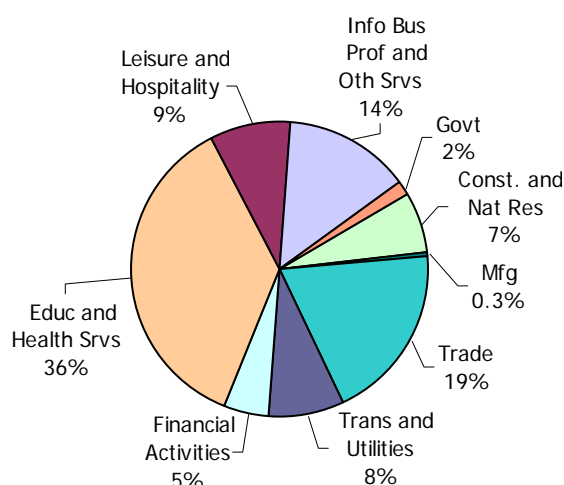
Of the nearly 26,600 jobs that North Central Wisconsin will gain between 2002 and 2012, almost 9,800 jobs, or roughly 36 percent, will be in education and health services. (See pie chart to right.) This reflects the largest numerical job growth and the fastest rate of job growth (25%) of any major industry group.

A considerable share of this health care growth will concentrate around the Marshfield area. In 2003, in overall terms, Wood County employers accounted for 22 percent of North Central Wisconsin's employment and 26 percent of North Central Wisconsin's wages.

Narrowing the focus to health care and social assistance, Wood County employers accounted for 44 percent of the region's employment in that sector and 51 percent of the region's wages in that sector.

As the table below demonstrates, employment in major industry groups is expected to change at different rates. In the last decade, productivity-enhancing technology has increased paper manufacturing capacity at a pace much faster than demand grew. This

Distribution of Job Growth by Industry Sectors in North Central Wisconsin: 2002 - 2012



Industry Projections for North Central Workforce Development Area, 2002-2012

Industry Title	Employment		Ten-year change	
	2002 Estimate	2012 Projected	Numeric	Percent
Total Non-farm Employment	198,070	224,660	26,590	13.4%
Construction/Mining/Natural Resources	8,680	10,480	1,800	20.7%
Manufacturing	39,820	39,890	70	0.2%
Food Manufacturing	4,600	4,590	-10	-0.2%
Paper Manufacturing	9,090	7,600	-1,490	-16.4%
Machinery Manufacturing	3,420	3,590	170	5.0%
Trade	35,560	40,650	5,090	14.3%
General Merchandise Stores	5,650	6,100	450	8.0%
Transportation and Utilities (Including US Postal)	10,680	12,880	2,200	20.6%
Financial Activities	11,600	12,820	1,220	10.5%
Education and Health Services (Incl'dg state & local govt. ed. & hosp.)	38,800	48,570	9,770	25.2%
Ambulatory Health Care Services	11,150	15,260	4,110	36.9%
Hospitals (Including state & local govt.)	9,180	11,190	2,010	21.9%
Leisure and Hospitality	17,540	19,890	2,350	13.4%
Information/Prof Services/Other Services	22,610	26,250	3,640	16.1%
Government (Excluding USPS, state & local govt. ed. and hosp.)	12,780	13,230	450	3.5%

Source: WI DWD, Office of Economic Advisors, September 2004

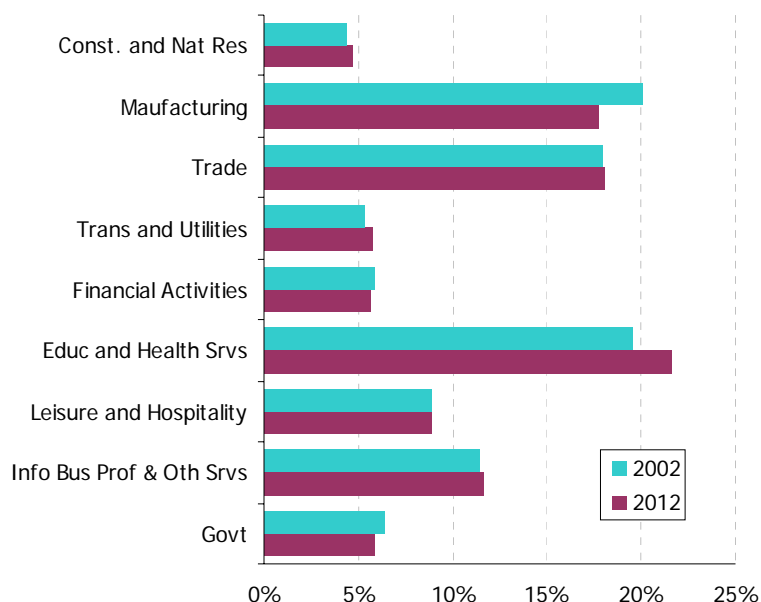
contributed to consolidation trends which make this industry likely to lose more jobs than any other identified. Modes of manufacturing which tend to require less experience and training (such as food manufacturing) are less likely to grow quickly.

Unlike consumer-driven industries, machinery manufacturing relies on business customers who need to upgrade or expand capacity. When those customers expect only modest demand growth in the next quarter or two, machinery manufacturing slows down faster and sooner than other manufacturing sectors. Nonetheless, machinery manufacturing remains an example of a skill-intensive, high value-added mode of production that is more likely to stand up to the rigors of international competition and technological change.

The table on page 1 shows that the manufacturing sector, on the whole, probably will not keep up with other sectors' growth. By logical extension, the bar graph below shows that, in 2012 (the darker set of bars), the manufacturing sector is the only one with a substantially smaller share of overall employment than in 2002 (the lighter set of bars). This is consistent with national and statewide trends for several decades.

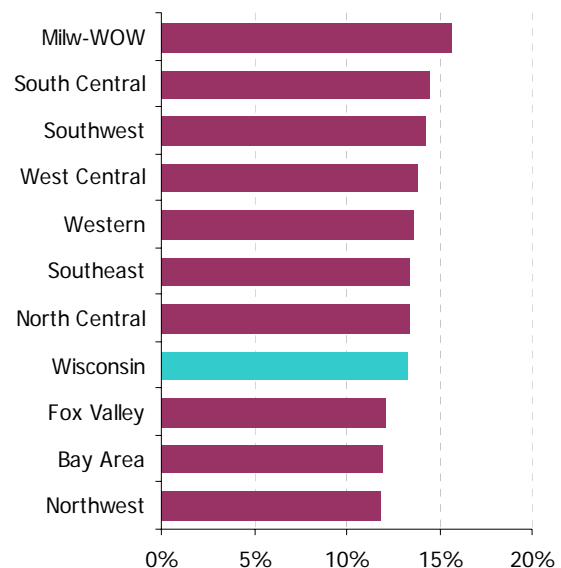
From 2002 to 2012, government employment will grow modestly, just 450 jobs or 3.5 percent in North Central Wisconsin. Government employment will be a smaller share of total employment in 2012 than it was in

Distribution of Jobs by Industry Sectors in North Central Wisconsin: 2002 - 2012



Source: WI DWD, Office of Economic Advisors, September 2004

Changes in Employment for Workforce Development Areas in Wisconsin: 2002 - 2012



Source: WI DWD, Office of Economic Advisors, Sept. 2004

2002 (see graph below). This may not be a good indicator of the total cost of government because many education and health care workers are not included in this category but government funding often plays important roles in such jobs. According to Wisconsin Department of Administration projections, the North Central region's working-age population will shrink from 224,448 in 2005 to 208,560 in 2030. That represents 7.1 percent fewer people in prime tax-paying years (20 to 59 years old). During the same time frame, the population aged 60 and over will grow 58,850 people or 70.1% (from 85,346 to 145,196). This suggests surging demand for services.

The trade sector is projected to gain 5,090 jobs or 14.3 percent between 2002 and 2012. About 17 percent of that growth will occur in the wholesale trade sector, where the average annual wage was roughly \$34,961 in 2003. The other 83 percent of the growth will be in the retail trade sector, where the average annual wage was closer to \$18,931 in 2003. Then as now, there will be roughly four retail jobs for every wholesale job. Roughly 58 percent of North Central Wisconsin's wholesale employment and 60 percent of its wholesale wages come from employers in Marathon County.

Employment and wages

North Central Wisconsin's all-industries average wage (\$30,400) is roughly 91 percent of the statewide all-industries average wage (\$33,423). Education & health services was the only industry with a higher average wage in North Central Wisconsin than statewide. In most north central counties, this industry accounts for 15 to 20 percent of total employment and 20 to 30 percent of wages; in Wood County education and health accounts for 33 percent of employment and 41 percent of wages and the industry's average wage is \$44,168 versus \$37,643 for the region and \$35,045 for the state. This industry gained 927 roughly jobs in the North Central region between 2002 and 2003, which is a larger numerical gain than any other industry.

Over the same time period, the region lost about 1,321 manufacturing jobs and Wood County lost 587. The impact of these job losses was magnified by the fact

2003 Average Annual Wage by Industry Division in North Central WDA

	Average Annual Wage Wisconsin	North Central	Percent of Wisconsin	1-year % change
All Industries	\$ 33,423	\$30,400	91%	3.6%
Natural resources	\$ 25,723	\$23,800	93%	0.7%
Construction	\$ 40,228	\$34,482	86%	0.6%
Manufacturing	\$ 42,013	\$37,528	89%	3.0%
Trade, Transportation, Utilities	\$ 28,896	\$24,921	86%	2.5%
Information	\$ 39,175	Not avail.	Not avail.	Not avail.
Financial activities	\$ 42,946	\$39,371	92%	5.9%
Professional & Business Services	\$ 38,076	\$33,134	87%	7.1%
Education & Health	\$ 35,045	\$37,643	107%	3.8%
Leisure & Hospitality	\$ 12,002	\$9,994	83%	2.7%
Other services	\$ 19,710	\$15,994	81%	-0.5%
Public Administration	\$ 35,689	\$29,872	84%	4.8%

Source: WI DWD, Bureau of Workforce Information, Quarterly Census of Employment & Wages

that manufacturing was the only industry with an average annual wage (\$37,528) and total payroll (\$1.4 billion) in the same league as the education and health services industry. Concentrations vary from Vilas County, where manufacturing accounts for 5.6 percent of jobs and 7.0 percent of payroll to Lincoln County, where manufacturing accounts for 30.9 percent of jobs and 39.4 percent of payroll.

2003 Employment and Wage Distribution by Industry in North Central WDA

	Employment		Total Payroll	
	Annual average	1-year change		
Natural Resources	3,152	50	\$ 75,017,953	
Construction	8,495	36	\$ 292,920,505	
Manufacturing	38,581	-1,321	\$ 1,447,878,064	
Trade, Transportation, Utilities	46,402	-250	\$ 1,156,365,392	
Information	Suppressed	Not avail.	Suppressed	
Financial Activities	12,230	508	\$ 481,503,733	
Professional & Business Services	8,799	68	\$ 291,550,414	
Education & Health	39,985	927	\$ 1,505,165,482	
Leisure & Hospitality	18,209	40	\$ 181,984,716	
Other services	6,241	-50	\$ 99,817,853	
Public Administration	10,768	-45	\$ 321,665,240	
Not assigned	Suppressed	Not Avail.	Suppressed	
All Industries	195,883	-37	5,954,827,915	

Source: WI DWD, Bureau of Workforce Information, Quarterly Census of Employment & Wages

Significant industries

Top Five Industries in North Central WDA

Industry	March-2004		Numeric Employment Change	
	Establishments	Employees	2003 - 2004	1999 - 2004
Educational Services	94	13,592	-242	479
Ambulatory Health Care Services	364	12,049	379	3,108
Food Services and Drinking Places	832	12,012	162	281
Hospitals	11	9,395	75	1,273
Wood Product Manufacturing	92	8,104	367	-685

Source: DWD, Bureau of Workforce Information, Quarterly Census of Employment and Wages

The table above lists the five industry sub-sectors with the most jobs in North Central Wisconsin as of March 2004. These sub-sectors fit within major sectors discussed on pages 1 and 2. Between 1999 and 2004, wood product manufacturing employment declined and food service/drinking places experienced modest job growth; meanwhile ambulatory health care services and hospitals added jobs at a swifter pace. Together, these five industries provided over one fifth of the jobs in North Central Wisconsin (see pie chart to right). The remainder of this page and the next two pages discuss each industry sub-sector individually and list prominent occupations in each sub-sector.

Share of jobs in top five industries in North Central WDA



I. Education Services

The number of school-aged residents plays an important role in primary funding formulas for primary and secondary schools. Department of Administration population projections suggest that North Central Wisconsin will have 85,296 residents aged 5 to 19 in 2005 and 80,043 residents in that age group in 2030. This loss of 6.2 percent of the school-aged population will increase pressure for school consolidation, particularly because it comes at a time when the population in prime tax-paying years (20 to 59 years old) will be shrink by 7.1 percent. The 60-and-over population will grow by 70.1 percent and will compete with schools for tax dollars. (See page 2 for more demographic analysis.) These trends will put pressure on wages and job security for school employees and increase the challenge of investing in the future workforce. The increasing complexity and importance of technology in the workplace and mounting global competition suggest that initial education investments, continuing education and retraining will become more important.

Top 20 Occupations in Wisconsin in Education Services Ranked by number of jobs projected in 2012

- Elementary School Teachers, Except Special Education
- Secondary School Teachers, Except Special and Vocational Education
- Teacher Assistants
- Middle School Teachers, Except Special and Vocational Education
- Janitors and Cleaners, Except Maids and Housekeeping Cleaners
- Secretaries, Except Legal, Medical, and Executive
- Vocational Education Teachers, Postsecondary
- Education Administrators, Elementary and Secondary School
- Health Specialties Teachers, Postsecondary
- Special Ed. Teachers, Preschool, Kindergarten, and Elementary School
- Kindergarten Teachers, Except Special Education
- Educational, Vocational, and School Counselors
- Cooks, Institution and Cafeteria
- Office Clerks, General
- Special Education Teachers, Secondary School
- Vocational Education Teachers, Secondary School
- Special Education Teachers, Middle School
- Business Teachers, Postsecondary
- Librarians
- Bookkeeping, Accounting, and Auditing Clerks

Source: WI DWD, Office of Economic Advisors, Sept. 2004

II. Ambulatory Health Care Services

Few industries are more driven by age demographics than the educational services industry, but health care industries can make a compelling case. North Central Wisconsin's 59-and-under population will shrink by 19,343 people or 5.8 percent between 2005 and 2030. Meanwhile the 60-and-over population will grow by 59,850 people or 70.1 percent. Like education, there is little question that health care will be necessary and there are many questions about how much individuals will pay for and how much public support will be available.

Looking at all-industries employment and wages, establishments in Wood County account for 22 percent of North Central Wisconsin's total jobs and 26 percent of the regions total payroll. Focusing on ambulatory health care services, Wood County employers account for 60 percent of the jobs and 64 percent of the payroll. Between 2002 and 2003, Wood County gained 267 jobs and \$34 million in payroll in ambulatory health care, which was more than the other eight North Central counties combined.

III. Food Services and Drinking Places

In North Central Wisconsin, food service and drinking establishments provide 6.4 percent of the jobs. This sub-sector's average annual wage (\$8,702) is so far below the region's all-industries average wage (\$30,400) that it contributes just 1.8 percent of total payroll. Part time and seasonal schedules limit wage gains and allow workers to coordinate school, child care and other jobs.

Food service and drinking places account for a greater share jobs in Vilas County (13%) than in any other county in the region. Vilas County also enjoyed a higher average wage in that sub-sector (\$9,625) than any other North Central county. It accounts for 13 percent of Vilas County's jobs as opposed to a regional average of 6.4 percent of jobs. The concentration of eating and drinking places might drive up the sub-sector's average wage somewhat. Still, Vilas County's all-industries average wage (\$23,289) is the lowest in the region. Perhaps it is a sign of the county's struggle to generate more jobs in better-paying sectors. Available data does not definitively support or refute either interpretation.

Top 20 Occupations in Wisconsin in Ambulatory Health Care Services Ranked by number of jobs projected in 2012

- Registered Nurses
- Nursing Aides, Orderlies, and Attendants
- Licensed Practical and Licensed Vocational Nurses
- Medical Assistants
- Maids and Housekeeping Cleaners
- Receptionists and Information Clerks
- Food Preparation Workers
- Dental Assistants
- Medical Records and Health Information Technicians
- Psychiatric Aides
- Dental Hygienists
- Office Clerks, General
- Medical Secretaries
- Family and General Practitioners
- Internists, General
- Dentists
- First-Line Supervisors/Managers of Office & Administrative Support Workers
- Customer Service Representatives
- Medical and Health Services Managers
- Mental Health and Substance Abuse Social Workers

Source: WI DWD, Office of Economic Advisors, Sept. 2004

Top 20 Occupations in Wisconsin in Food Services and Drinking Places Ranked by number of jobs projected in 2012

- Waiters and Waitresses
- Combined Food Preparation and Serving Workers, Including Fast Food
- Bartenders
- Cooks, Restaurant
- Cooks, Fast Food
- First-Line Supervisors/Managers of Food Preparation and Serving Workers
- Dishwashers
- Food Preparation Workers
- Cooks, Short Order
- Dining Room and Cafeteria Attendants and Bartender Helpers
- Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop
- Counter Attendants, Cafeteria, Food Concession, and Coffee Shop
- Food Service Managers
- Chefs and Head Cooks
- Cashiers
- Janitors and Cleaners, Except Maids and Housekeeping Cleaners
- Driver/Sales Workers
- General and Operations Managers
- Truck Drivers, Light or Delivery Services
- Bakers

Source: WI DWD, Office of Economic Advisors, Sept. 2004

IV. Hospitals

The occupation lists on pages 4-5 suggest that educational services employers offer a wide mix of occupations with significant differences in education-and-training requirements while many occupations in food services and drinking places require little formal education and training.

Ambulatory care services employers and hospitals require a fair number of workers with specialized training in nursing, therapy, or medical technology. Clerical and administrative positions are often technical or specialized. Janitorial/cleaning jobs and food service jobs are among the few jobs in health care settings that do not require much pre-employment training or education past high school. Perhaps not unlike eating and drinking places, the janitorial/cleaning units and food service units in hospitals see some relationship between limited wage gain potential and employee longevity. This is likely to persist until turnover costs become more apparent (because the labor market tightens or because the work evolves to require more technical background or employer-specific knowledge).

V. Wood Product Manufacturing

Several wood product manufactures in North Central Wisconsin make windows and doors. Manufactured homes, prefabricated buildings and sawmill products are also rather prominent. The occupation list to the right largely reflects this mix.

Wood product manufacturing is responsible for 6.4 percent of Marathon County's jobs and 6.3 percent of total payroll. Moreover, 54 percent of North Central Wisconsin's wood product manufacturing jobs and 55 percent of North Central Wisconsin's wood product manufacturing jobs are in Marathon County.

Between 2002 and 2003, Vilas County's wood product manufacturers decreased employment by 70 jobs (or 28%) and Wood County's by 148 jobs (or 8%). Vilas County's average wood product manufacturing wage rose roughly \$3,900 between 2002 and 2003, but this reflects average employment falling faster than total wages fell (perhaps because lower-paid workers lost their jobs before higher-paid workers.)

Top 20 Occupations in Wisconsin in Hospitals Ranked by number of jobs projected in 2012

Registered Nurses
Nursing Aides, Orderlies, and Attendants
Licensed Practical and Licensed Vocational Nurses
Maids and Housekeeping Cleaners
Radiologic Technologists and Technicians
Medical and Clinical Laboratory Technologists
Medical and Health Services Managers
Physical Therapists
Janitors and Cleaners, Except Maids and Housekeeping Cleaners
Respiratory Therapists
Interviewers, Except Eligibility and Loan
Medical Secretaries
Surgical Technologists
Receptionists and Information Clerks
Medical Transcriptionists
Medical Assistants
Food Servers, Nonrestaurant
Medical Records and Health Information Technicians
Secretaries, Except Legal, Medical, and Executive
Occupational Therapists

Source: WI DWD, Office of Economic Advisors, Sept. 2004

Top 20 Occupations in Wisconsin in Wood Product Manufacturing Ranked by number of jobs projected in 2012

Woodworking Machine Setters, Operators, and Tenders, Except Sawing
Team Assemblers
Carpenters
Sawing Machine Setters, Operators, and Tenders, Wood
Machine Feeders and Offbearers
Helpers--Production Workers
Cabinetmakers and Bench Carpenters
First-Line Supervisors/Managers of Production and Operating Workers
Fiberglass Laminators and Fabricators
Laborers and Freight, Stock, and Material Movers, Hand
Sales Reps, Wholesale & Manufacturing, Except Technl-Scientific Products
Machinists
Industrial Truck and Tractor Operators
Inspectors, Testers, Sorters, Samplers, and Weighers
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders
Maintenance and Repair Workers, General
Cutting/Punching, & Press Mach. Setters, Operators, & Tenders, Mtl-Plastic
Truck Drivers, Heavy and Tractor-Trailer
Office Clerks, General
Industrial Production Managers

Source: WI DWD, Office of Economic Advisors, Sept. 2004

Occupation projections

Occupational Group Summary for North Central Workforce Development Area

Occupational Groups	Estimated Employment		2002 - 2012 Change		Annual average			Average hourly wage	Annual average wage
	2002	2012	Numeric	Percent	New Jobs	Replacements	Total Openings		
Total, All Occupations	198,070	224,660	26,590	13.4%	2,660	4,780	7,440	\$14.65	\$30,472
Management, Business & Financial Operations	13,660	16,020	2,360	17.3%	240	250	490	\$27.06	\$56,276
Computer, Math, Architecture & Engineering	5,350	6,230	880	16.4%	80	100	180	\$23.25	\$48,368
Life & Social Sciences, Legal, Art & Entertaining	8,190	9,440	1,250	15.3%	120	160	280	\$17.15	\$35,666
Education, Training, & Library	9,190	10,930	1,740	18.9%	170	190	360	\$18.42	\$38,310
Healthcare Practitioners, Technicians & Support	17,470	22,890	5,420	31.0%	540	310	850	\$19.35	\$40,256
Food Preparation & Serving	16,290	18,370	2,080	12.8%	210	650	860	\$7.73	\$16,069
Protective, Maintenance & Personal Care Service	14,650	16,960	2,310	15.8%	230	340	570	\$10.67	\$22,195
Sales and Related	18,570	21,050	2,480	13.4%	250	640	890	\$13.01	\$27,060
Office/Administrative Support	33,580	35,850	2,270	6.8%	230	780	1,010	\$12.02	\$24,993
Natural Resources, Mining & Construction	8,820	10,610	1,790	20.3%	180	180	360	\$16.67	\$34,664
Installation, Maintenance, Repair & Production	32,980	34,350	1,370	4.2%	140	790	930	\$14.57	\$30,297
Transportation/Material Moving	19,330	21,960	2,630	13.6%	260	410	670	\$13.01	\$27,069

Source: Wisconsin Department of Workforce Development, Office of Economic Advisors, September 2004

The table above begins with two columns comparing each occupational group's employment in 2002 with its projected employment in 2012. Office/administrative support occupations and installation, maintenance, repair & production occupations provide

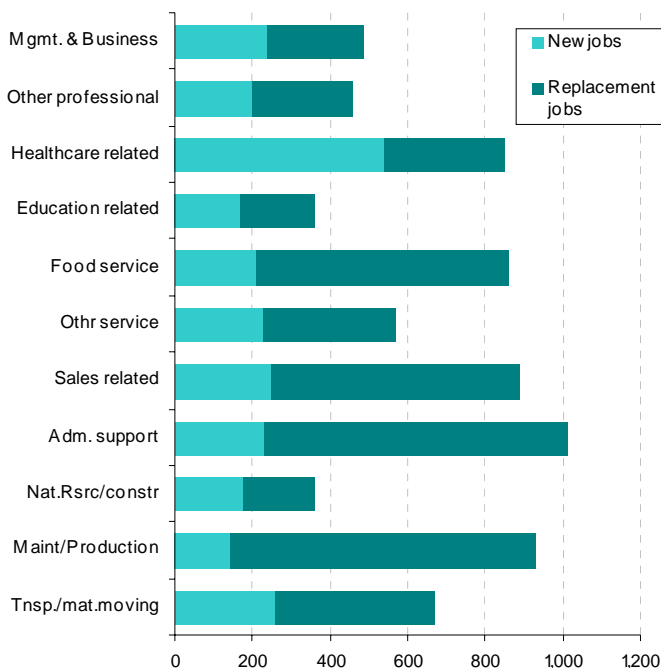
more jobs than other occupational groups. They will continue to do so, but by narrowing margins.

The third column shows that healthcare practitioners, technicians and support staff will add a larger number of jobs (5,420) than any other occupational group will add between 2002 and 2012.

The fourth column shows that the all-occupations job growth rate will be 13.4 percent. Installation, maintenance, repair & production occupations will grow more slowly (4.2%), as will office & administrative support occupations (6.8%). Production equipment and office equipment are becoming more efficient and more sophisticated at accelerating rates. This equipment increases output per worker so quickly that it restrains the growth of demand for new workers (hence the low growth rates). Such equipment also requires more technical training to operate at peak productivity. Many occupations that once saw extensive on-the-job training a generation ago will require more pre-employment education and training as well as ongoing skills updates.

The fifth and six columns show new jobs created per year and the annual number of replacements needed due to people leaving the occupation permanently. This information is also shown in the graph to the left. The sum of new jobs per year and replacement workers per year is total openings per year, which appears in the seventh column.) Turnover

Annual Openings by Occupation Groups in North Central WDA



Source: WIDWD, Office of Economic Advisors, September 2004

Twelve Occupations with the Most Annual Openings from 2002-2012 in North Central Workforce Development Area

Occupational Title	Estimated Employment		2002-2012 Change		Annual average			Typical Education or Training Path	Average Wage	Middle 50 Percent Hourly Wage Range
	2002	2012	Numeric	Percent	New Jobs	Replacements	Total Openings			
Retail Salespersons	6,000	6,770	770	12.8%	80	220	300	1 mo. or less trng. on-the-job	\$10.11	\$6.80 - \$10.98
Cashiers	5,040	5,550	510	10.1%	50	250	300	1 mo. or less trng. on-the-job	\$7.85	\$6.45 - \$8.59
Waiters/Waitresses	3,260	3,700	440	13.5%	50	170	220	1 mo. or less trng. on-the-job	\$6.60	\$5.85 - \$6.86
Truck Drivers/Hvy/Tractor-Trailer	5,350	6,540	1,190	22.2%	120	90	210	1-12 mo. training on-the-job	\$16.83	\$13.37 - \$19.91
Registered Nurses	3,870	5,070	1,200	31.0%	120	80	200	Bachelor's or Assoc. degree**	\$24.31	\$19.75 - \$26.84
Comb Food Prep/Server/Incl Fast	3,130	3,760	630	20.1%	60	140	200	1 mo. or less trng. on-the-job	\$7.21	\$6.16 - \$8.12
Nursing Aides/Orderlies/Attndnts	3,450	4,330	880	25.5%	90	50	140	1 mo. or less trng. on-the-job	\$9.79	\$8.56 - \$11.00
Labrs/Frght/Stock/Matrl Movrs/Hand	3,690	3,710	20	0.5%	0	120	120	1 mo. or less trng. on-the-job	\$10.79	\$8.36 - \$12.73
Sls Reps/Whls/Mfg/Ex Tech/Sci	2,370	2,890	520	21.9%	50	60	110	1-12 mo. training on-the-job	\$21.81	\$13.68 - \$27.37
Office Clerks/General	3,510	3,680	170	4.8%	20	80	100	1 mo. or less trng. on-the-job	\$10.71	\$8.23 - \$13.00
Janitors/Cleanrs Ex Maids/Hskpng	3,150	3,590	440	14.0%	40	60	100	1 mo. or less trng. on-the-job	\$9.90	\$7.68 - \$11.86
Customer Service Reps	2,820	3,440	620	22.0%	60	40	100	1-12 mo. training on-the-job	\$11.85	\$9.03 - \$13.79

Source: WI DWD, Office of Economic Advisors, September 2004

* may include classroom instruction ** depends on employer

probably drives the need for 650 replacement workers per year in food preparation & serving. The number of workers approaching retirement is probably a significant factor in office/administrative support occupations and in installation, maintenance, repair and production occupations (790 replacements per year). As 4-year colleges pull more students in other directions, these jobs could become harder to fill.

The table above lists 12 occupations with the largest number of projected openings per year. Almost all retail sales and cashier openings arise because workers leave those occupations permanently (as opposed to

new job growth). Compared to most occupations on the list, truck driving and nursing occupations require more training, create more new jobs and pay higher wages. Jobs requiring more education and training investment are more likely to be well compensated.

The table below lists the occupations projected to grow the fastest. Starting from a low numerical base means some occupations (like software engineers) can offer a small number of openings (less than 10 per year) and still grow quickly (over 45% in 10 years). Nonetheless, fast growth may suggest an accelerating need to train workers for certain occupations.

Twelve Occupations with the Greatest Percent Change from 2002-2012 in North Central Workforce Development Area

Occupational Title	Estimated Employment		2002-2012 Change		Annual average			Typical Education or Training Path	Average Wage	Middle 50 Percent Hourly Wage Range
	2002	2012	Numeric	Percent	New Jobs	Replacements	Total Openings			
Netw Systms/Data Comm Analysts	140	220	80	57.1%	10	0	10	Bachelor's degree	\$24.73	\$17.78 - \$28.43
Medical Assts	620	940	320	51.6%	30	10	40	1-12 mos. training on-the-job	\$11.70	\$9.99 - \$13.26
Computer Software Engrns Apps	260	380	120	46.2%	10	0	10	Bachelor's degree	\$28.30	\$23.46 - \$33.43
Medcl Records/Health Info Techs	520	760	240	46.2%	20	10	30	Associate degree	\$11.63	\$9.60 - \$13.55
Home Health Aides	640	930	290	45.3%	30	10	40	1 mo. or less trng. on-the-job	\$8.97	\$7.98 - \$10.04
Dental Hygienists	280	400	120	42.9%	10	0	10	Associate degree	\$23.42	\$21.35 - \$26.33
Dental Assts	450	640	190	42.2%	20	10	30	1-12 mos. training on-the-job	\$12.72	\$10.29 - \$13.36
Occupational Therapists	210	290	80	38.1%	10	0	10	Bachelor's degree	\$24.21	\$20.96 - \$26.83
Physical Therapists	240	330	90	37.5%	10	0	10	Master's degree	\$28.76	\$23.96 - \$33.00
Heating/AC/Refrig Mechs/Instlrs	240	330	90	37.5%	10	0	10	1 yr. or more trng. on-the-job*	\$14.70	\$11.19 - \$17.39
Social/Human Service Assts	480	650	170	35.4%	20	10	30	1-12 mos. training on-the-job	\$10.76	\$8.35 - \$13.01
Psychiatric Aides	340	460	120	35.3%	10	10	20	1 mo. or less trng. on-the-job	\$10.17	\$7.89 - \$12.61

Source: WI DWD, Office of Economic Advisors, September 2004

* may include classroom instruction ** depends on employer

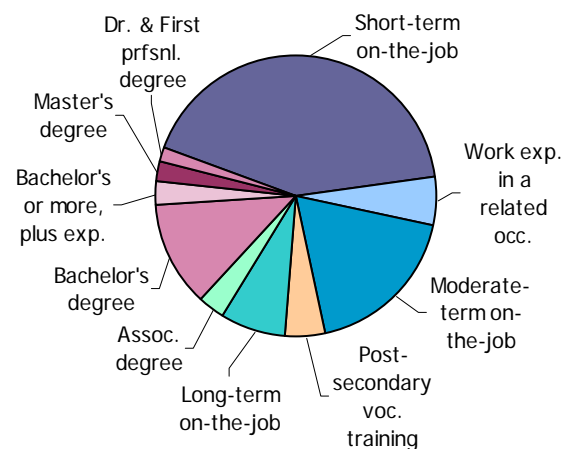
Between 2002 and 2012, North Central Wisconsin expects 7,460 job openings per year and 3,180 of them (or nearly 42 percent) will require short-term on-the-job training. Of those 3,180 openings, just 910 will be new jobs and 2,270 (or 71 percent) will be openings arising because a worker left the occupation permanently. In contrast, North Central Wisconsin will see 80 openings per year requiring a professional degree and 30 of them (or 38 percent) will be replacements.

The Bureau of Labor Statistics suggests that several occupations that require more experience, education and training tend to hold on to employees longer. "Jobs with noticeably high employee tenure include management occupations (6.0 years), architecture and engineering occupations (5.8 years), protective service occupations (5.5 years), education, training, and library occupations (5.1 years), and production occupations (5.0 years)." See <http://www.bls.gov/news.release/tenure.nr0.htm>. Meanwhile, the converse also appears to be true, to some extent. "Jobs with somewhat low employee tenure include food preparation and serving related occupations (1.8 years), personal care and service occupations (2.7 years), sales and related occupations (2.8 years), and healthcare support occupations (2.9 years)." Id. Nonetheless, jobs requiring only short-term on-the-job training can give workers experience needed to climb the career ladder or change directions.

According to the 2000 Census roughly 269,359 people over the age of 24 resided in North Central

Wisconsin and about 32,416 of them (or 12.1 percent) listed Bachelor's degrees as their highest level of educational attainment. Roughly 12.2 percent of openings projected between 2002 and 2012 will require a Bachelor's degree and another 2.9 percent will require a Bachelor's degree or more plus work experience. The counties of Wood, Portage and Marathon, with concentrations in healthcare, insurance and educational services industries, are likely to account for a very significant share of these openings. The more rural parts of North Central Wisconsin (including much of Vilas and Adams counties) may find it challenging to create jobs that attract college graduates and may find it more challenging to attract college graduates to fill health care openings that will be plentiful elsewhere.

Distribution of Total Openings in North Central WDA by Training Path



Typical Education or Training Path* for Jobs in North Central Workforce Development Area

Education or Training	Number of Occupations	Estimated Employment		2002-2012 Change		Annual average			Distribution of Total Openings
		2002	2012	Numeric	Percent	New Jobs	Replacements	Total Openings	
Total	740	198,070	224,670	26,600	13.4%	2,650	4,810	7,460	100.0%
Associate degree	34	5,130	6,380	1,250	24.4%	130	100	230	3.1%
Bachelor's degree	106	22,900	27,440	4,540	19.8%	450	460	910	12.2%
Master's degree	37	3,960	4,670	710	17.9%	70	80	150	2.0%
First professional degree	16	1,750	2,220	470	26.9%	50	30	80	1.1%
Doctoral degree	40	1,190	1,520	330	27.7%	30	20	50	0.7%
Long-term on-the-job training	81	16,010	18,140	2,130	13.3%	210	350	560	7.5%
Moderate-term on-the-job training	168	45,340	49,450	4,110	9.1%	410	950	1,360	18.2%
Short-term on-the-job training	136	76,130	85,250	9,120	12.0%	910	2,270	3,180	42.6%
Bachelor's degree or more, plus work exp.	30	6,280	7,310	1,030	16.4%	100	120	220	2.9%
Work exp. in a related occupation	42	11,210	12,730	1,520	13.6%	150	240	390	5.2%
Postsecondary vocational training	50	8,170	9,560	1,390	17.0%	140	190	330	4.4%

* This provides a general indication of the education or training typically needed in occupations. There may be other pathways.

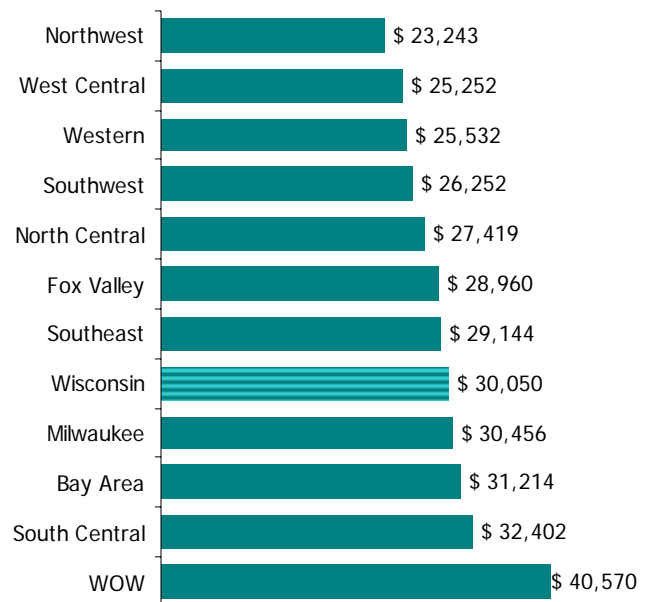
Source: WI DWD, Office of Economic Advisors, September 2004

Total personal income

Per capita personal income in North Central Wisconsin was \$27,419 in 2002. The highly urban Milwaukee had a somewhat higher PCPI (\$30,456), but the suburban Waukesha-Ozaukee-Washington area's PCPI (\$40,570) was head and shoulders above the rest. (See bar graph to right.) Between 1997 and 2002, North Central Wisconsin's *total* personal income growth (27.4%) was roughly on par with the state's (26.6%) and the nation's (28.8%), but the region's population growth (2.6%) was slower than the state's (3.3%) or the nation's (5.6%), so local *per capita* personal income growth (24.2%) compared favorably with statewide PCPI growth (22.6%) and national PCPI growth (22.0%). (See table below.) Population changes can affect PCPI just as much as total income changes.

For example, counties that will have fewer school-aged children in coming years will have fewer people contributing to population figures but not to income figures. Counties that will have more retirement-aged residents will rely on different income sources. With a greater share of its population closer to typical working ages, Marathon County residents derive nearly 71 percent of their income from net earnings with Portage

Per Capita Personal Income by WDA



Source: US Dept. of Commerce, Bureau of Economic Analysis

Total Personal Income in North Central Workforce Development Area

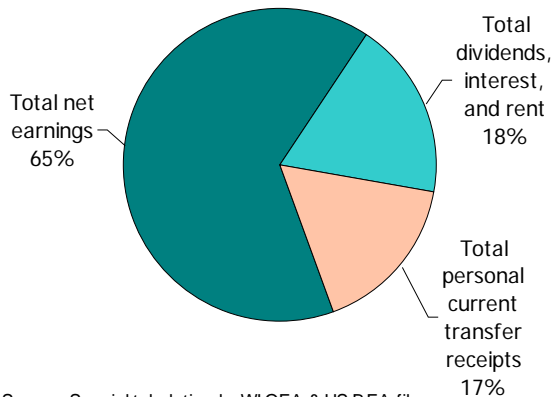
% Change from 1997 to 2002

	1997	2002	North Central	Wisconsin	United States
Population	399,107	409,342	2.6%	3.3%	5.6%
Total Personal Income (in thousands)	\$8,809,991	\$11,223,729	27.4%	26.6%	28.8%
Net Earnings	\$5,740,592	\$7,310,101	27.3%	27.6%	30.4%
Dividends, Interest, and Rental Income	\$1,745,006	\$2,057,128	17.9%	14.9%	18.4%
Transfer Receipts	\$1,324,393	\$1,856,500	40.2%	39.4%	35.8%
Income Maintenance	\$81,656	\$96,775	18.5%	29.1%	21.3%
Unemployment insurance benefit payments	\$47,952	\$101,220	111.1%	147.2%	166.1%
Retirement and other	\$1,194,785	\$1,658,505	38.8%	36.9%	34.4%
Per Capita Personal Income	\$22,074	\$27,419	24.2%	22.6%	22.0%
Per Capita Net Earnings	\$14,384	\$17,858	24.2%	23.5%	23.4%
Per Capita Dividends, Interest, and Rental Income	\$4,372	\$5,025	14.9%	11.3%	12.1%
Per Capita Transfer Receipts	\$3,318	\$4,535	36.7%	35.0%	28.6%
Total Employment (see glossary)	241,659	258,431	6.9%	5.0%	7.3%
Wage and salary jobs	201,234	211,419	5.1%	4.3%	5.9%
Number of non-farm proprietors	33,228	39,956	20.2%	11.2%	16.0%
Average earnings per job	\$27,052	\$32,128	18.8%	21.0%	21.2%
Average wage & salary disbursements	\$24,771	\$29,237	18.0%	19.0%	21.1%
Average nonfarm proprietors income	\$15,197	\$18,892	24.3%	37.0%	24.7%

Source: Special tabulation by WI DWD, Office of Economic Advisors & US Dept. of Commerce, Bureau of Economic Analysis, May 2004

and Wood counties close behind (both over 65 percent). Net earnings include wages, salaries, proprietor's income, paycheck withholdings and an adjustment for residents working outside the area.

Major Components of Total Personal Income in 2002 in North Central Workforce Development Area



Source: Special tabulation by WI OEA & US BEA files

Marathon is the only county in North Central Wisconsin that is projected to have more residents aged 20 to 59 in 2030 than in 2005; the region as a whole will see its 20- to 59-year-old population decline 15,888 people or 7.1 percent. This will affect total net earnings. Less than half of Vilas County's income was net earnings.

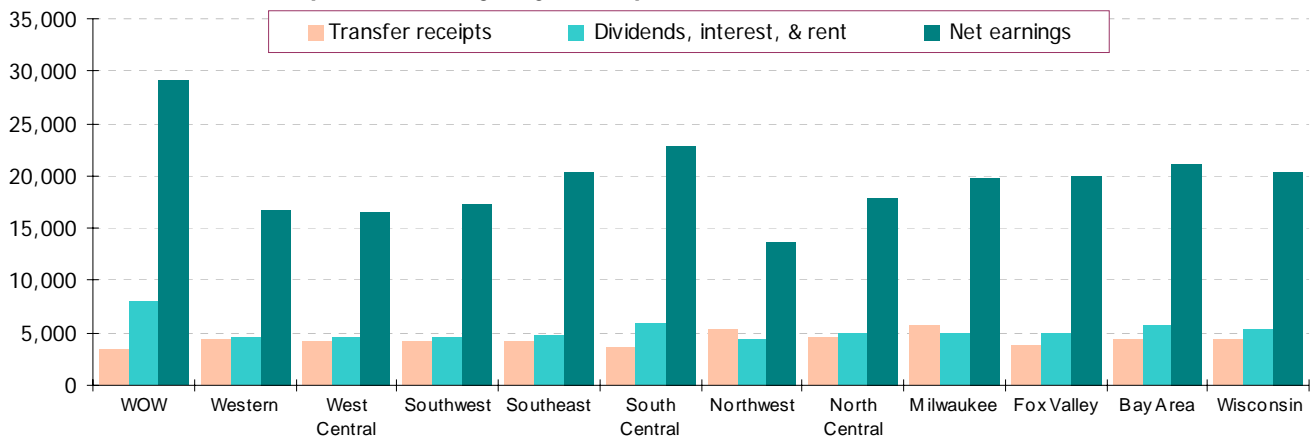
Transfer receipts were important components of income in the counties of Oneida (20%), Adams (23%)

and Forest (25%), while contributing smaller shares to income in the counties of Marathon (13%), Portage (14%) and Wood (16%). Transfer receipts include payments and reimbursements from programs such as Social Security, Medicare and unemployment insurance. Between 1997 and 2002, North Central Wisconsin's unemployment insurance payouts increased 111 percent, which was less than the state (147%) or the nation (166%). Dividends, interest and rent were particularly important in Oneida County (22.7 percent of total income) and Vilas County (30 percent of total income).

The region as a whole and the state as a whole derive more income from dividends, interest and rent than transfer receipts, but the reverse is true in Adams, Forest, Langlade and Lincoln counties. If the federal government tried to stimulate investment by reducing guaranteed transfer payments, North Central Wisconsin residents who rely heavily on investment income would probably benefit more than those who rely on transfer payments.

The graph below shows each Wisconsin region's per capita transfer receipts, per capita dividends, interest & rent and per capita net earnings. The concentration of technical and professional jobs in and near the Waukesha-Ozaukee-Washington region raises earnings and allows for more disposable income to go toward investments that pay dividends, interest or rent. Housing costs in large parts of that region effectively bar people who receive means-tested transfer payments, so per capita transfer payments are low.

Per Capita Income by Major Components of Total Personal Income: 2002

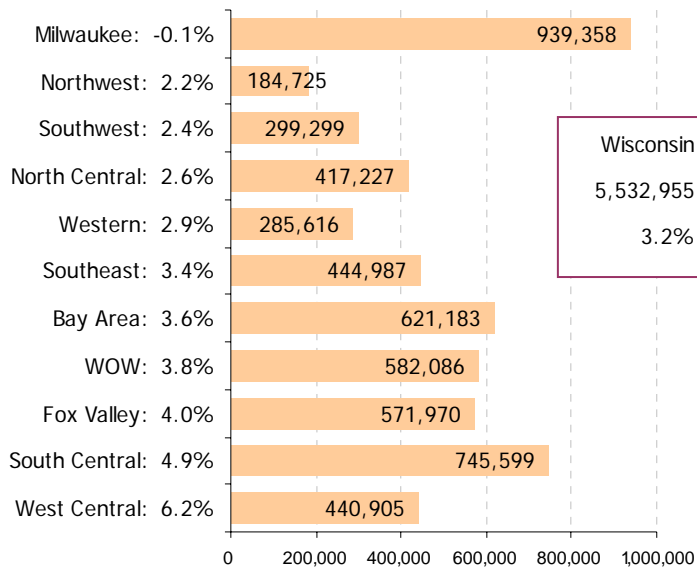


Source: Special tabulation by WI DWD, Office of Economic Advisors & US Dept. of Commerce, Bureau of Economic Analysis

Connecting the Elements

The data sets in this profile become more interesting and useful when we better understand their interrelationships. Industries provide jobs, jobs generate earnings, earnings drive consumer demand that fuel industries. Population trends play significant roles in various parts of cycle.

2004 WDA Population and Percent Change from 2000



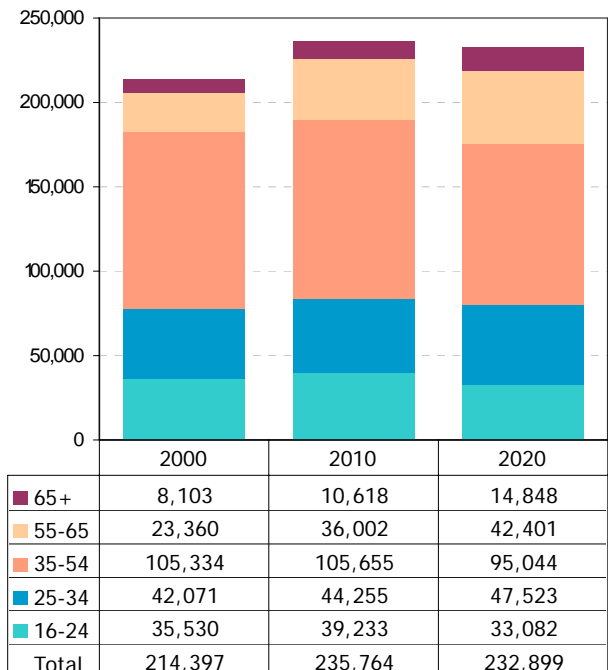
Source: WI Dept. of Administration, Demographic Services Center

Between the April 2000 census and the January 2004 population estimate North Central Wisconsin added 10,533 people or 2.6 percent. With fast population growth, Adams County (4.0%) and Vilas County (4.4%) both experienced more deaths than births between 2000 and 2004, but compensated with high rates of net migration (people moving in minus people moving out). Natural change (births minus deaths) was also negative in Forest, Langlade, Lincoln and Oneida counties and very low in Wood County. Marathon and Portage counties were the only ones in North central Wisconsin where births outnumbered deaths by a substantial margin. Of the 10,522 people added to the population, 3,054 or 29 percent were the result of natural change and 7,468 or 71 percent were the result of net migration. Natural increase is projected to peak at 4,104 between 2010 and 2015 and fall to 488 between 2025 and 2030.

Compared to their non-Hispanic and white counterparts, Hispanic and nonwhite populations are generally more likely to participate in the workforce and have higher birth rates. Across the state and within the North Central region, areas that have more success attracting these populations tend to have higher natural growth rates, younger workforces and higher labor force participation rates. Elements of this dynamic can be seen in places like Wausau, Stevens Point and, to a lesser extent, Marshfield. Although available data does not track the ages of people moving to Adams and Vilas counties, age demographics and projections suggest that much of their population growth is attributable to retirees moving in. These trends affect the future of the labor force.

The table and chart below show that North Central Wisconsin's labor force grew 17 percent between 1990 and 2000, is projected to grow 10 percent between 2000 and 2010 and is projected to shrink 1.2 percent between 2010 and 2020. The shrinkage would be more extreme if not for the sharp growth in 55- to 64-year

North Central WDA Labor Force Projections by Age



Decade change	17.4%	10.0%	-1.2%
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Source: DWD, Office of Economic Advisors, August 2004

olds and 65-and-over in the workforce. Growing 31 percent (from 8,103 to 10,618) between 2000 and 2010 and growing nearly 40 percent (from 10,618 to 14,848) between 2010 and 2020, the workers aged 65 years or more constitute the only age group projected to grow in the 2000-2010 decade, the 2010-2020 decade and the 2020-2030 decade (not shown). The 55- to 64-year-old workers grow from 11 percent of the workforce in 2000 to 18 percent of the workforce in 2020 and the 65-and-over workers grow from 3.8 percent of the workforce in 2000 to 6.8 percent in 2020 and 8.1 percent in 2030 (not shown). These demographic dynamics suggest several potential labor market trends for North central Wisconsin.

Holding on to older workers.

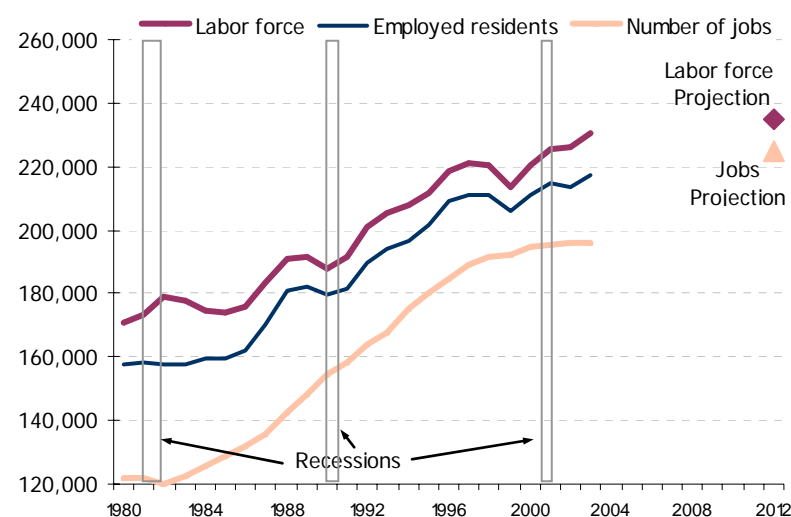
Employers may struggle to find and train replacements fast enough. Older workers often have unique knowledge of their industries, their employers and their individual jobs. Efforts to coordinate training programs between private industry groups and local educational institutions may strive to include older workers. Employers who cannot find enough replacements could change schedules or other workplace policies to improve retention of older workers.

Advancement opportunities for younger workers. Unless they pursue careers elsewhere, some of North Central Wisconsin's most qualified workers may accelerate their careers as employers scramble to fill vacancies left by retirees. Professional or technical occupations more than entry-level jobs in leisure & hospitality or retail.

Changing business models and/or restrained job growth. Employers who do not implement training programs in a timely fashion may rely more heavily on outsourcing. Some employers could maintain output levels by upgrading equipment rather than replacing

workers. Smaller organizations may be more specialized in a narrower niche market. Unless North Central Wisconsin finds a way to replace production jobs (which constitute a shrinking share of overall employment) with professional and technical jobs (or some other high-wage alternative), it will become increasingly difficult to fund education and social services at levels that attract top employers and workers.

Historic & Projected Labor Force & Jobs in North Central WDA



Source: WIDWD, Bureau of Workforce Information & Office of Economic Advisors

Tighter labor markets pinching employers

The graph above shows a shrinking gap between the number of jobs in North Central Wisconsin and the number of employed residents. This gap is projected to shrink further. Tightening labor markets can be positive for workers in the short to medium term, but employers facing consistent challenges in filling positions are more likely to be cautious or even reluctant when considering expansion. Alternatively, they may be more likely to consider expansion methods that require less growth of local employment. Neither of these trends would benefit workers in the long term.

The workforce development profiles are produced by the Office of Economic Advisors in the Wisconsin Department of Workforce Development. The author of this profile and regional contact for additional labor market information is:

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